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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,553	11/28/2001	Sung-Won Lee	678-716	2837

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EXAMINER	
NGO, NGUYEN HOANG	
ART UNIT	**PAPER NUMBER**
2663	

DATE MAILED: 02/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/996,553	LEE ET AL.	
	Examiner	Art Unit	
	Nguyen Ngo	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 15-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *5-12 and 20-28* is/are allowed.

6)☒ Claim(s) *1-3 and 15-19* is/are rejected.

7)☒ Claim(s) *4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This communication is in response to the amendment of November 14, 2005. All changes made to the Claims have been entered. Accordingly, Claims 1-12, and 15-28 are currently pending in the application.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 15, 16, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Galand et al. (US 6188698), hereinafter referred to as Galand.

Regarding claim 1, Galand discloses a queuing and transmission scheduling system and method for use in a multimedia network, that ensures a suitable quality of service for a wide range of applications (transmission of packet data having various quality of service, col2 lines 60-63) and further discloses classifying each of the plurality of connections as red or green depending on whether said each connection transmits excess traffic or not, so as to achieve a behavior classification of said plurality of connections (a method for classifying a service class for transmission of packet data (connection) service in a two-way communication network (packet switching network being bidirectional), col3 lines 9-14). Galand further discloses;

a counter for computing the total number of red packets queued in a connection queue associated with the given priority classes (measuring a total number of packet data (counter for computing) for a period of time (duration of connection) associated with a classification of service class (priority class), figure 5a and col8 lines 1-10 and col14 lines 45-49).

that if the counter (COUNT(i)) is greater then the red threshold (Red_Thr), box 540 is entered for declaring current connection as red (determining a parameter (outcome of inequality to be red or green) based on whether the measured number of packet data (counted packets) is larger than a threshold (Red_Thr) value associated with a two-way communication characteristic of the packet data transmission (red characteristic), col8 lines 7-10).

of declaring the current connection depending on the comparator (a value (outcome of comparator), figure 5a) and marking packets as excess (red packets) or non-excess (green packets) (classifying the service class of the packet data (red or green) using the parameter, col6 lines 4-6).

Regarding claim 2, Gland discloses the switching node implementing the method comprises a receive part which receives data flow entering the node and a transmit part which outputs data flow (col5 lines55-60) and further discloses the switching node having input and output links for receiving and transmitting packets originated from a plurality of connections from a wide range of applications (implemented over a forward link and a reverse link (network being bidirectional), col3 lines 5-8).

Regarding claim 15, Galand discloses a switching node that includes a flexible and efficient packet queuing and transmission scheduling system and method for use in a multimedia network, that ensures a suitable quality of service for a wide range of applications (a service class classifying apparatus for transmission of packet data having various quality of service, col2 lines 60-63) and further discloses classifying each of the plurality of connections as red or green depending on whether said each connection transmits excess traffic or not, so as to achieve a behavior classification of said plurality of connections (a method for classifying a service class for transmission of packet data (connection) service in a two-way communication network (packet switching network being bidirectional), col3 lines 9-14). Galand further discloses;

a counter for computing the total number of red packets queued in a connection queue associated with the given priority classes (main processor (counter) for measuring a total number of packet data (counter for computing) for a period of time (duration of connection) associated with a classification of service class (priority class), figure 5a and col8 lines 1-10 and col14 lines 45-49).

that if the counter (COUNT(i)) is greater then the red threshold (Red_Thr), box 540 is entered for declaring current connection as red (determining a parameter (outcome of inequality to be red or green) based on whether the measured number of packet data (counted packets) is larger than a threshold (Red_Thr) value associated with a two-way communication characteristic of the packet data transmission (red characteristic), col8 lines 7-10).

of declaring the current connection depending on the comparator (a value (outcome of comparator), figure 5a) and marking packets as excess (red packets) or non-excess (green packets) (classifying the service class of the packet data (red or green) using the parameter, col6 lines 4-6).

of a switching fabric for routing the packet data traffic (figure 2 and col5 lines 40-42).

Regarding claim 16, Galand discloses a selection and distribution (access adapters) for synchronizing data streams from a plurality of links (call admission control for controlling the entering flow from a connection), and for transmitting the synchronized data stream to the switch (policing the traffic in function of its compliance to the connection agreed to traffic descriptors, col5 lines 60-67).

Regarding claim 19, Galand discloses determining whether the service class is symmetric or asymmetric by measuring the total number of packet data (col8 lines 63-col9 lines 17). Examiner interprets the measuring of the total number of packet data to correlate to the measuring of delay (the number of packets received during a period of time correlating to delay) to determine the four types of priority queues.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 3, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galand et al. (US 6188698), hereinafter referred to as Galand.

Regarding claim 3 and 18, Galand fails to disclose the specific limitation of claim 3. Galand however discloses that it is important to provide the network components (node and links (being forward or reverse) with mechanisms that control the priority of the packets, and process them in order to guarantee the desired QoS to their corresponding connections (col1 lines 35-40). It would have thus been obvious to include the measuring of the total number of packet data transmitted over a forward link and a reverse link in order to efficiently provide the mechanism that control the priority of packets of a switching network (being bidirectional) through certain links.

Regarding claim 17, Galand fails to disclose the specific limitation of claim 17. Galand however discloses that an access node (switch node implementing the discussed method) be designed for supporting the access of the user existing communication equipments with their corresponding protocols, and that it is essential to know the different requirements of each traffic in order to optimize the different processes (col1 lines 20-27). It would thus be obvious to incorporate a gateway for supporting transfer of protocol between different networks to efficiently and correctly transmit packets according to their requirements (protocol) in a switching node implementing the queuing and transmission scheduling system.

Allowable Subject Matter

6. Claims 5-7, 8-12, 20-23, and 24-28 are allowed.

7. Claims 5 and 20 is allowable over the prior art of record since the cited references taken individually or in combination fail to particularly disclose **measuring a number of detected packet data; dividing a jitter value by the measured number of packet data and determining a parameter based on whether or not the divided value is larger than a threshold value associated with traffic characteristic of the packet data transmission.** It is noted that the closest prior art Galand (US 6188698) shows a queuing and transmission scheduling system and method for use in a multimedia network, that ensures a suitable quality of service for a wide range of applications and further discloses classifying each of the plurality of connections as red or green depending on whether said each connection transmits excess traffic or not, so

as to achieve a behavior classification of said plurality of connections. However the stated prior art fails to disclose or render obvious to the above underline limitations as claimed.

8. Claims 8 and 24 is allowable over the prior art of record since the cited references taken individually or in combination fail to particularly disclose **determining whether a first parameter associated with characteristics of the service class identifies a symmetric service corresponding real time data or not, determining whether a second parameter associated with a period of the service class identifies a service for a predetermined period of time representing the packet data transmission occurs more than a predetermined number of times or not; and calculating a value to classify the service class of packet data using the first and second parameters .** It is noted that the closest prior art Galand (US 6188698) shows a queuing and transmission scheduling system and method for use in a multimedia network, that ensures a suitable quality of service for a wide range of applications and further discloses classifying each of the plurality of connections as red or green depending on whether said each connection transmits excess traffic or not, so as to achieve a behavior classification of said plurality of connections. However the stated prior art fails to disclose or render obvious to the above underline limitations as claimed.

9. Claim 4 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments, see remarks, filed November 15, 2005, with respect to the rejection(s) of claim(s) 1-6, 8-21, 23-28 under 102 (b and e) and 103 (a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Galand et al. (US 6188698), as discussed above.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Schulz (US 6571101), Method and Radio Communications System For Controlling Signaling.

b) Carlson (US 6381649), Data Flow Monitoring At A Network Node Using Periodically Incremented Counters For Comparison To Predetermined Data Flow Thresholds.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Ngo whose telephone number is (571) 272-8398. The examiner can normally be reached on Monday-Friday 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

N.N.
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